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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/762,762	HILL ET AL.	
	Examiner	Art Unit	
	Paul Marcantoni	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-55,57-91 and 93-119* is/are pending in the application.

4a) Of the above claim(s) *44-55,57-91 and 93-106* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11-43 and 107-119* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/10/08, 1/14/07,10/4/04, 11/24/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Applicant's arguments filed 12/21/07 have been fully considered but they are not persuasive. The applicants' amendment necessitated the new grounds of rejection below:

New Matter:

Claims 1-9,11-43, and 107-119 are rejected under the first paragraph of 35 USC 112 and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

The negative limitation in many amended claims (e.g. claim 1 and others) stating –with the proviso that said sacrificial agent does not provide polyethylene glycol or aromatic compounds having carboxylic acid groups or salts thereof—is new matter.

The applicants do have support for excluding "aromatic carboxylic acids or salts thereof" (see [0040]). Applicants even state in [0040] that these particular compounds may be excluded from scope of claim so they have literal support. However, with respect to polyethylene glycol, applicants have no literal support for this negative limitation "does not provide polyethylene glycol". Thus, the new matter rejection has been made because excluding polyethylene glycol is a negative new matter limitation with no literal support from the original disclosure.

Objection to the Specification:

Fly Ash

The applicants' definition of fly ash remains objected to on page 11 of their original specification: The applicants define fly ash to include ash materials including those not from coal combustion such as wood ash, municipal solid waste ash, etc.

Fly ash is limited to only coal combustion ash (Class C or Class F) and does not include other ash materials. Applicants should correct their definition of fly ash because a term cannot be used when given a meaning which is repugnant to its usual meaning. In re Hill, 73 USPQ 482 (CCPA 1947). Fly ash only refers to coal combustion ash and other types of combustion ash are not fly ash contrary to applicants improper definition.

Air Entrainment:

The examiner objects to applicants' definition of air entrainment as inclusive of other inert gases such as nitrogen on page 17, lines 8-11. Air entrainment refers to specifically and only air and correction in the specification is deemed necessary. A term cannot be used when given a meaning which is repugnant to its usual meaning. In re Hill, 73 USPQ 482 (CCPA 1947). If applicants wish to include entrainment other than air they should probably have defined it gaseous entrainment or gas entrainment. Air entrainment refers to air alone.

USC 103:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

103 rejection #1:

Claims 1-9,11-43, and 107-119 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56022665 A (Nippon Oils and Fats Co LTD), DE 19528912 (Furusawa et al.), WO 85/01500 (Nicholson), Naji et al. '266 B1, Young '389 A1, Boggs '358 B1, MacDonald '352, Hoarty et al. '362, Okimura et al. '978, or Chugh '189 B1.

JP '665 teaches an air entraining agent for concrete comprising anionic surfactant and a glycol ether in amounts overlapping applicants' claims. This meets applicants' method of making an air entraining cement mixture containing fly ash since this combination of components can be used with fly ash cement (contains fly ash) and Portland cement wherein fly ash itself is a *conventional* aggregate additive (See Also MPEP 2144.03 regarding official notice or conventional in the art). The anionic surfactant meets the limitation of air entraining agent and the glycol ether the sacrificial agent. The use of a sacrificial agent (or absorbent or scavenger agent) to reduce the tendency of absorption of the air entraining agent is not a new concept either because this concept was known and conventional as well at the time of applicants' invention (see again MPEP 2144.03). It is known in the art that excess carbon in fly ash absorbs air entrainers and thus reduces the effectiveness of air entrainment (what applicants call the "detrimental effects of components of fly ash on air entrainment activity in their claim 1 yet do not clearly specify this is exactly what they are referring to in claim 1). It is further the examiner's position that the glycol ether is even listed as their so called "sacrificial agent" in claim 114 so it is clear that it would also cause less than 2% volume additional air entrainment in the cementitious mixture.

DE 19528912 teaches an aeration or air entraining mixture for a cement containing high levels of residual carbon comprised of fatty acid surfactant, non-ionic surfactant, and an additional component selected from salts of alkyl sulfonates, akylaryl sulfonates and sulfate esters of higher alcohols and resonates. It is the examiner's position that the first two components could represent the air entraining agent and the last component (the sacrificial agent) or the first component (fatty acid surfactant) the air entrainer and the last two components the sacrificial agents (non-ionic surfactant and additional component) or the non-ionic surfactant could be the air entrainer and the last two components the sacrificial agents. The sacrifical agents of applicants' claimed invention are the same as those in DE '912 and thus the amount of additional air entrainment should also be less than 2 vol% additional air entrainment. For the same reasons as was stated in JP '665, it is known in the art that excess carbon in fly ash absorbs air entrainers and thus reduces the effectiveness of air entrainment (what applicants call the "detrimental effects of components of fly ash on air entrainment activity in their claim 1 yet do not clearly specify this is exactly what they are referring to in claim 1).

Nicholson (WO 85/01500) teach a process of making an air entraining cement mixture comprising fly ash (see p.6, lines 13-14) and teaches air entrainers and sacrificial agents consistent with what applicants are claiming for their instant invention. Further, the sacrificial agents are the same as those claimed by applicants and listed in their specification and thus the properties of less than 2% additional air entrainer should be the same. For the same reasons as was stated in JP '665, it is known in the art that

excess carbon in fly ash absorbs air entrainers and thus reduces the effectiveness of air entrainment (what applicants call the "detrimental effects of components of fly ash on air entrainment activity in their claim 1 yet do not clearly specify this is exactly what they are referring to in claim 1).

Naji et al. '266 B1 teach air entraining a cement mixture containing fly ash (see col.3, line 37) by mixing one "or more" non-ionic, cationic and anionic surfactants such as sodium salts of alpha olefin sulphonate and sodium lauryl sulphonate (col.3, lines 20-27). Note that together they can be the air entrainer but also either one could also be the sacrifical agent in accordance with applicants' invention. One of the air entrainers could function as the sacrificial agent. For the same reasons as was stated in JP '665, it is known in the art that excess carbon in fly ash absorbs air entrainers and thus reduces the effectiveness of air entrainment (what applicants call the "detrimental effects of components of fly ash on air entrainment activity in their claim 1 yet do not clearly specify this is exactly what they are referring to in claim 1). Also, Naji et al. teach adding cellulose, starch, alginate, polyvinyl alcohol, polyethylene oxide, and polypropylene oxide which would also function as the applicants' sacrificial agents (col.3, lines 10-20). Note for example that applicants broadly claim "alcohols" as a candidate for sacrifical agent in claim 6 and polyvinyl alcohol is an alcohol. Thus, it would also be a sacrificial agent that causes less than 2% by volume additional air entrainment.

Young '389 A1 also recognizes the same problem applicants are trying to overcome in their invention regarding difficulties in using fly ash containing excess

carbon that reduces air entrainment in cement mixtures. Young teaches adding solid and/or liquid chemicals as sacrifical agents to mitigate the absorption potential of fly ash (see p.2, [0016]). Young further teaches that an example of these chemicals includes detergents that have surfactants and emulsifiers. This is inclusive of anionic surfactants such as sodium lauryl sulfate as well as non-ionic surfactants such as nonyl phenol ethoxylate surfacatant (NP-9) which is most effective as a sacrifical agent or absorption agent of the carbon containing ash (see p.4, [0047] and [0060]).

Boggs '358 B1 teach a method of pretreating fly ash for use in a cement mixture that is known and conventionally used in Portland cement concrete (see col.1, lines 20-52). Boggs solves the same problems applicants allege to find the solution for by using a sacrifical agent he calls a scavenger or adsorption agent that adsorbs onto the carbon and takes it away from adsorption of the air entraining agent. Thus, the air entrainment deleterious effects are greatly reduced. Boggs teaches using an aromatic carboxylic acid as his sacrifical agent or scavenger agent together with an air entrainment agent. The aromatic carboxylic acid is a sacrificial agent even claimed by applicants (see claims 4 and 6, for example) and thus its properties as sacrificial agent and causing less than 2 vol% additional air entrainment in cement mixtures would have also been expected by one of ordinary skill in the art to be the same.

MacDonald '352 teaches air entraiment in cement mixes comprising high carbon fly ash and teaches adding a composition of high polymer protein powder, water, polyvinyl alcohol, and a soap gel solution (see col.3, lines 1-15). It is the examiner's position that polyvinyl alcohol can be construed as the sacrificial agent since applicants

claim their sacrifical agent is an alcohol (see applicants' claim 6). The properties such as less than 2 vol% additional air entrainment would also have been expected since applicants state in claim 6 alcohol is an example of a sacrifical agent. Soap gel is a surfactant and would be construed as the air entrainer. Thus, MaDonald teaches applicants' claimed method.

Hoarty et al. '362 also teach air entraining a cement mixture of fly ash of carbon content by adding a water soluble C8 fatty acid salt as the air entrainer and sodium octanoate or potassium octanoate as the sacrificial agent (see claim 1 in col.4). The octanoate is the sacrifical agent since is present in amounts sufficient to stabilize entrained air and lower the rate of air loss. This can be accomplished by the octanoate literally used as the sacrifical agent, scavenger agent, or absorption agent for the carbon present in the fly ash which could reduce air entrainment.

Okimura et al. '978 teach a combination of polyoxyethylene sorbitan oleate (which is the air entrainer) and Vinsol resin which is a conventionally used air entrainer tha could be the sacrificial agent (See Table 7, example 1 in col.5). Okimura et al. teach that the polyoxyethylene sorbitan oleate is not subtstantially adsorbed by unburned carbon contgained in the fly ash and exhibits excellent air entraining effect (col.1 last paragraph). Note that applicants' sacrificial agent can be another air entrainer since it still could cause up to but not including 2 vol% air entrainment.

Chugh '189 B1 teach producing an air entrained fly ash containing cement mixture. Chugh teach Class C fly ash and fluidized bed combustion ash are part of the mixture (col.4 lines 10-22) as well as an air entrainer (see col.10, lines 35-40). Chugh

teach that fluidized bed combustion ash (FBC) are present in amounts and proportions sufficient to reduce the negative effects of the presence of unburned carbon in the Class F fly ash. Thus, FBC is the sacrificial agent in Chugh.

103 Rejection #2:

Claims 1-9,11-43, and 107-119 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 56022665 A (Nippon Oils and Fats Co LTD), DE 19528912 (Furusawa et al.), WO 85/01500 (Nicholson), Naji et al. '266 B1, Young '389 A1, Boggs '358 B1, MacDonald '352, Hoarty et al. '362, Okimura et al. '978, or Chugh '189 B1 alone or in view of Young '389 A1 and Boggs '358 B1.

All of the primary references above teach the same components of air entrainer and sacrificial agent added to cement mixtures. This additional combination has been made to show that the purpose of adding a sacrificial agent to neutralize the detrimental effects of the fly ash (ie the carbon in the fly ash reducing air entrainment). Young and Boggs both teach that fly ash containing residual carbon is a problem reducing the effectiveness of air entrainment and that adding a sacrifical agent (or scavenger or adsorption agent) to adsorb the carbon and prevent it from having an effect on the air entrainer and thus the air entrainment properties of the cement mixtures is known. Thus, the motivation for using a sacrificial agent for cement mixtures containing carbon residual fly ash is old and known in the art.

Response:

Fly Ash:

The examiner maintains his position is proper. Fly ash refers only to a by-product of coal combustion. Applicants are referred to [0052] of their own specification wherein they state ASTM C 618 *defines* fly ash a by product of coal combustion (not municipal refuse combustion, wood combustion, vegetable refuse, etc). Ash from sources such as wood and municipal waste (these are non-fly ash combustion ashes) is not the same nor is mixtures of fly ash and other components. Those mixtures are not all encompassing of fly ash. The objection stands.

Air Entrainment:

Air entrainment refers only to air. The term air is clear to mean air and not all gases. Applicants are in error with respect to providing definitions for well known terms. They can be their own lexicographer to the extent that it does not conflict or is not repugnant with the conventionally accepted meaning of the term. Both definitions of fly ash and air entrainment most certainly is inconsistent with the common meaning of both terms. The objection stands.

As for air entrainment, the same is true. Air means air, not any gas. While air is made up of mostly nitrogen, oxygen, argon, and trace amounts of other gases, it is a specific type of gas and air does not mean nitrogen and it does not mean oxygen gas. Air is compositionally different than nitrogen alone, oxygen alone, etc. To say air is encompassing of any gas is incorrect. Nevertheless, this is a situation of terms defined by applicants which are repugnant to their usual, conventional, and accepted meaning.

JP 56022665

JP ‘665 teaches a mixture of anionic surfactant and glycol ether as air entrainer added to cement. The applicants argue JP '665 does not teach the detrimental effects of carbon containing fly ash on air entrainment nor the solution to their problem. In rebuttal, applicants already admit in their specification that glycol ethers can be sacrificial agents (see [0075]) and that the sacrificial agent can even be another surfactant or air entrainer. Further, the anionic surfactant represents the air entrainer portion. It is examiner’s position that one of these two components would have been expected to function as air entrainer and the other sacrificial agent to obtain the air entrainment of less than 2 vol.%. Note that applicants do not provide any specific amounts of each of sacrificial agent and air entrainer so it reads on any amount of two surfactants from 0 to 100 wt%. (See claim 1 which contains no amounts). Certainly, there must be a critical range of amounts and specific identities of each component (sacrificial agent and air entrainer) that lead to applicants' desired result of less than 2 vol% air entrainment.

It is also noted that the prior art teaches the same materials (sacrificial agent and air entrainer) and thus the same properties of would have been an expected result. The examiner is not relying on any personal knowledge but only established case law and the MPEP. As for the assertion that JP ‘665 must teach the same solution as applicants to meet their composition claim, the examiner disagrees. The applicants are referred to the recent 2007 CAFC decision regarding Abbott Labs v Baxter Pharm Products Inc. The CAFC held that the new property (solution) of a prior art process does not render

the process claim patentable. The CAFC reasoned that a claimed process having the same steps as a prior art process is not patentable simply because the claimed process identifies a new advantageous property of the prior art process. The CAFC stated their cases consistently held that a reference may anticipate even when the relevant properties of the thing disclosed where not appreciated at the time of the instant invention. Thus, the prior art taught mixing the same components in Abbott and though the prior art did not teach the same solution, that was not relevant to the decision of the CAFC as stated above.

With reference to the applicants' argument that the prior art primary references (e.g. JP '665) alone or in view of Young '389 A1 and Boggs '358 B1 is required by their instant claims 2, 3, and new claim 119 to exceed or could the amount necessary to neutralize the detrimental effects of fly ash. In rebuttal, the applicants would appear to merely change the concentration without the benefit of criticality or unexpected results. The applicants own data from their figures (e.g. Figure 4) shows that when they increase their sacrificial agent (EGPE-ethylene glycol phenyl ether) from 0.025% to 0.05% there is no unexpected result. In other words, the amount of air entrained in concrete remains the same. Changes in temperature, concentrations, or other process conditions of an old process does not impart patentability unless the recited ranges are critical, i.e., they produce a new and unexpected result. In re Aller, (CCPA 1955(220 F2d 454, 105 USPQ 233. The applicants' increase in sacrificial agent concentration or amount failed to provide a new and unexpected result and thus their change in concentration/amount of sacrificial agent would have been an obvious design choice for

one of ordinary skill in the art. Young and Boggs teach that it is known in the art to add a sacrificial (scavenger) agent to reduce carbon content in fly ash and this teaching is applicable to the primary references.

DE 19528912:

The rebuttal for DE '912 is essentially the same as JP '665. The applicants argue that the air entraining additives of DE '912 are only functioning as air entraining agents. Yet, applicants do not provide any experimental evidence of this allegation and it is thus not convincing. Applicants also do not explicitly define the specific materials that are air entrainers or sacrificial agents in, for example claim 1, and thus cannot argue features of their invention not claimed (such as specific sacrificial agents and air entrainers). Applicants admit in their disclosure that their sacrificial agents can also be surfactants or air entrainers and it would thus have been expected that one of the two added surfactants (which are air entrainers) would function as the sacrificial agent.

The applicants point out that their new limitation teaches that the sacrificial agent *does not comprise* aromatic compounds having carboxylic acid groups or salts thereof and DE '912 requires the presence of C12-C24 alkanoic acids and their alkali metal lower allylamine and lower alkanolamine salts. The examiner agrees that alkanoic acids and their salts are thus fatty acids (which is a carboxylic acid) but DE '912 does not teach that these particular carboxylic acids and salts are aromatic. In fact, most carboxylic acids (synonymous with fatty acid or alkanoic acid) are straight chain (aliphatic). DE '912 never states that his surfactants are *aromatic* carboxylic acids or salts such as benzoic acid or salicylic acid.

In rebuttal, the applicants do have support for this limitation from their original disclosure (see paragraph [0040] but then in the next paragraph [0041] admit that aromatic compounds having carboxylic acid groups or salts thereof can still be suitable as sacrificial agents. The applicants also argue the combination again in view of Young and Boggs. The applicants are referred to the same explanation for primary reference JP '665 in view of Young and Boggs.

WO 85/1500-Nicholson:

The rebuttal for Nicholson is essentially the same as JP '665. Yet, applicants argue that the mixture of these two surfactants in Nicholson will not result in causing less than 2 vol.% air entrainment. Nicholson provides two surfactants (air entraining agents) among of which one would function as a sacrificial agent. It would have been expected since applicants air entrainers can also be sacrificial agents that the addition of two surfactants would lead to one being a sacrificial agent.

Applicants do not provide any experimental evidence of this allegation that the same degree of air entrainment will not result and it is thus not convincing. Applicants also do not explicitly define the specific materials that are air entrainers or sacrificial agents in, for example claim 1, and thus cannot argue features of their invention not claimed (such as specific sacrificial agents and air entrainers). Applicants admit in their disclosure that their sacrificial agents can also be surfactants or air entrainers and it would thus have been expected that one of the two added surfactants (which are air entrainers) would function as the sacrificial agent.

With reference to the applicants' argument that the prior art primary references (e.g. Nicholson) alone or in view of Young '389 A1 and Boggs '358 B1 is required by their instant claims 2, 3, and new claim 119 to exceed or could the amount necessary to neutralize the detrimental effects of fly ash, the examiner respectfully disagrees for the same reasons provided above in the response to JP '665.

Naji et al.

Naji et al. teach adding one or more different types of surfactants (cationic, anionic, nonionic) Together they would function as a air entrainer and sacrificial agent. Again, applicants indicate that surfactants can be their air entrainer and/or sacrificial agent and meet limitations of applicants' independent claims such as claim 1. Applicants do not claim specific identities of sacrificial agent and air entrainer and thus Naji still meets applicants' claim limitations and because applicants provide no specific amount of each component any amount suffices to achieve partially neutralizing the carbon (detrimental effect) of fly ash and causing less than 2 vol% air entrainment.

The examiner maintains that Naji does not have to teach alcohol as the sacrificial agent but this can merely be the "one or more other surfactants" added to the cement mixture. The examiner has provided sufficient documentary evidence because the broadness of their claims and no specific limitations for identified sacrificial agents or air entrainers in claims and thus the examiner disagrees with applicants' assertion.

The applicants argue a rejection not made as the examiner did no rejection with Young in view of Boggs. Rather, his rejection was Young and Boggs as separate primary references alone (rejection #1) or Young and Boggs both as secondary

references in a combination rejection (rejection #2). Nevertheless, the examiner will argue as each individually:

Young '389:

Mr. Young appears to hail from the same city, San Antonio, Texas, as that of applicants first inventor of record, Mr. Hill. Young would lead to the same results as applicants (ie causing less than 2 vol% air entrainment) because he teaches mixing the same components in same amounts (notice that applicants claim 1 requires any amount of sacrificial agent and any amount of air entrainer) and thus would result in same properties.

The applicants argue that Young does not teach their invention as a result of their amendment excluding "aromatic compounds having carboxylic acid groups or salts". In rebuttal, while Young teaches an example that may be his preferred example that one of his surfactants is a nonyl phenol (aromatic thus) ethoxylate surfactant. However, a reference is not limited to its examples or preferred embodiments. Young also teaches that the surfactant can be ionic or an ethoxylate and nowhere does he state that it must be phenol or aromatic ring structure. It could very well be that the surfactant is aliphatic or straight chain ethoxylate.

Boggs:

The applicants correctly point out that most of the teaching of Boggs is directed to aromatic carboxylic acids or salts as "scavengers" or "sacrificial agents" to remove carbon from fly ash. The applicants do not comment on the fact that this concept is thus old in the art to remove fly ash using scavangers or sacrificial agents. However, it is also

noted that while applicants exclude them (and have support for doing so) from their claim, they still also teach using these same compounds in their invention for the same exact purpose. Nevertheless, Boggs does not limit his invention to only aromatic carboxylic acids or salts. He states in column 2, lines 44-46 , that alkyl aryl compounds are also candidates for chemical carbon scavengers. One of ordinary skill in the art understands that not all alkyl aryl compounds are aromatic but can also be aliphatic or straight chain and thus still meet applicants' instant claims.

MacDonald '352:

The applicants also argue that MacDonald would not achieve less than 2 vol.% air entrainment and partially neutralize detrimental effects of fly ash. Applicants are respectfully referred to their own claims. They do not disagree that the sacrificial agent can not be an alcohol nor do they disagree that the soap gel is not a surfactant. They only rely on what they desire to achieve as a final result. Applicants are reminded that their present claims are met by MacDonald because any amount of both these components would lead to applicants desired results. Applicants provide no limitation for any specific sacrificial agent nor any limitation for any specific surfactant/air entrainer and they have admitted already in their original disclosure that both are within the purview of their invention. Their position is thus not convincing as the same components in their invention and in the prior art would lead to the same final properties when mixed in cement. Again regarding the combination rejection of MacDonald in view of Young and Boggs, refer to the same explanation provided in JP '665 above.

Hoarty:

Applicants argue that mixing different types of surfactants would both lead to air entrainment and not allegedly any would function as sacrificial agent. The applicants make their own assertion or allegation in this regard without the benefit of any experimental evidence to support such an assertion. Further, applicants "sacrificial agent" (or scavenger) can be a surfactant and the air entrainer can be a materially different surfactant as well so this position is not convincing. The applicants by their own admissions in their disclosure note that two different surfactants can be sacrificial agents and/or entrainers. It is the examiner's position that Hoarty still meets the limitations of applicants' claims especially with respect to broad teaching of sacrificial agent and air entrainer (surfactant) in any amount. Applicants provide no limitation so any amount will achieve their alleged less than 2 vol% air entrainment and partially neutralizing the carbon containing fly ash. Had applicants actually provided their specific limitations of amounts, this position may not hold but note that applicants present claims (e.g. claim 1) merely require any amount of each component which would achieve their final desired properties. Again regarding the combination rejection of Hoarty in view of Young and Boggs, refer to the same explanation provided in JP '665 above.

Okimura et a. '978:

The applicants argue that Okimura teach two air entraining agents (both surfactants) and without any evidence experimental or otherwise conclude that one would not function as a sacrifical agent (Vinsol resin being one and the other polyoxylethylene sorbitan oleate). The examiner disagrees because applicants own disclosure indicates

that they could use two different surfactants including those that both have some degree of air entrainment properties. Okimura is present in respective amounts and applicants own claims (e.g. claim 1) require no specific amounts so the amount of each surfactant can be any amount to achieve less than 2 vol% air entrainment. Applicants cannot argue specific limitations for amounts from their disclosure they actually use to get 2 vol% either for air entrainment because they do not claim the specific amounts of each component. While it is true that the claims may be read in light of the specification, it is improper to read the limitations of the specification into the claims. In re Yamato, 222 USPQ 93; In re Wilson, 149 USPQ 523; Graver Tank v. Linde Air Products Co. 80 USPQ 451 (Supreme Court). Regarding the combination rejection of Okimura in view of Young and Boggs, refer to the same explanation provided in JP '665 above

Chugh '189 B1:

The applicants own claims never distinguish whether the alleged sacrifical agent must be different than the air entrainment agent. As indicated in the background of their invention, it is possible that they can be a single air entrainer since the prior art added the same air entrainer in excessive amounts to function both as sacrificial agent and air entrainer. It is possible thus that if these components are the same, applicants invention reads upon on single air entrainer in any amount which would lead to less than 2 vol% air entrainment (and also neutralize the effects of carbon tainted fly ash). Again, applicants cannot argue the specific amounts of their disclosure regarding each component into their independent claims which contain absolutely no amounts. Since

they contain no amounts, this meets that any amount of component of air entrainer

meets applicants' instant claims.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Paul Marcantoni/
Primary Examiner, Art Unit 1793